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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/777,627 | 02/13/2004 | Fabrizio Fabbri | FABBRI4 | 5356 |

1444 7590 11/24/2006

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EXAMINER

BERTHEAUD, PETER JOHN

ART UNIT PAPER NUMBER

3746

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/777,627 | FABBRI, FABRIZIO | |
| | Examiner | Art Unit | |
| | Peter J. Bertheaud | 3746 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/17/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it contains the word "said", in reference to elements of the invention, in lines 3 and 4, which is legal phraseology.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Redman 3,427,988 in view of Elliott 4,618,316.

Redman discloses a fluid flow control device comprising at least two in-line cylinders (see col.1 lines 56-57), each of which is connected via respective conduits and

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relative valves to an intake manifold 22 and to a delivery manifold 23 (see col. 2, lines 25-26), characterized in that the intake manifold is positioned in front of the line of cylinders (see positioning in Fig. 1) and is in direct communication with the cylinders via a conduit (see cylindrical conduit within 22) connected to a dead compartment (see area directly behind valve within 27) provided as an extension of the respective cylinder and in which the intake valve 30 is located, retained in position by deformable means 32. Redman further discloses that the intake manifold has its axis coplanar with the cylinder axes (see Fig. 1) and that the compartment 26 containing the intake valve is cylindrical and coaxial with the respective cylinder. However, Redman does not show the cylinders being provided within a single block together with said conduits and said manifolds or that each cylinder communicates with the compartment containing the delivery valve via two parallel conduits.

Elliott teaches a reciprocating pump assembly including a plunger 16, an inlet manifold 22, a delivery manifold 26, and cylinders 50, 32 and valves 36, 52 for both. Elliot further teaches that the cylinders are provided within a single block 20 together with said conduits and said manifolds (see Fig. 1) and that each cylinder communicates with the compartment containing the delivery valve via two parallel conduits (see 58, Fig. 3, and col.4, lines 32-36). Elliott teaches that these aspects of the invention would be advantageous because only one closure member 76 is needed to secure and tighten the valve assemblies, and because the separator of the two parallel conduits provides a seat 58 for the valve 52.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the fluid flow control device of Redman by providing the cylinders together with said conduits and said manifolds within a single block and by having two parallel conduits communicate with the delivery valve, as taught by Elliott, in order to decrease the amount of closure members needed to seal the pump (see col.4, lines 52-60) as well as provide the delivery valve with a valve seat 58.

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Redman 3,427,988 in view of Elliott 4,618,316, and in further view of Hagler 3,306,214.

Redman in view of Elliott disclose the invention as discussed above. However, Redman in view of Elliott do not disclose that the deformable means are the actual valve seat sealing gaskets or that the deformable means is an elastic plate.

Hagler teaches a pressure control apparatus including a plunger 17 contained within a cylinder, an inlet check valve 24, and a deformable means 19. Hagler further teaches that the deformable means is the valve seat sealing gasket (see col. 1, lines 63-68) and that the deformable means is an elastic plate. Hagler teaches that these aspects of the invention would be advantageous because they make the pump capable of delivering a liquid under rapidly and widely varying pressure and flow.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the pump assembly of Redman and Elliott by making the deformable means a sealing gasket or an elastic plate, as taught by Hagler, in order to deliver a liquid under rapidly and widely varying pressure and flow (see col.1, lines 14-22).

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Conclusion


6. The prior art made of record, noted in the attached form 892, and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Bertheaud whose telephone number is (571) 272-3476. The examiner can normally be reached on M-F 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571) 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


PJB 11/17/2006


EHUD GARTENBERG
SUPERVISORY PATENT EXAMINER